

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

December 26, 2007

Operations Group Factual Report

A. ACCIDENT

Location: Sanford, Florida
Date: July 10, 2007
Time: 0835 Eastern Daylight Time
Aircraft: Cessna 310R, N501N
NTSB Number: NYC07MA162

B. OPERATIONS GROUP

Chairman: Brian Rayner
Air Safety Investigator
National Transportation Safety Board

Member: T.R. Proven
Air Safety Investigator
Federal Aviation Administration

Member: Cliff Baggett
Aviation Safety Inspector
Federal Aviation Administration

C. SUMMARY

On July 10, 2007, at 0835 eastern daylight time, a Cessna 310R, N501N, operated by the National Association for Stock Car Auto Racing (NASCAR), was destroyed during a collision with trees and structures in a residential area, while attempting an emergency landing to the Sanford Orlando International Airport (SFB), Orlando, Florida. The certificated commercial pilot and the certificated airline transport pilot (ATP) were fatally injured. Three people on the ground were fatally injured, and four were seriously injured. A post crash fire consumed the airplane and two single-family homes. Visual meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan was filed for the personal flight that was conducted under 14 *Code of Federal Regulations* (CFR) Part 91. The airplane departed Daytona Beach International Airport (DAB), Daytona Beach, Florida, at 0822, and was destined for Lakeland Linder Regional Airport (LAL), Lakeland, Florida.

The Operations Group convened at the accident site on July 10, 2007, and collected data pertaining to the commercial pilot and the ATP. During the investigation, Federal Aviation Administration (FAA) and the ATP's training records were reviewed,

and NASCAR dispatch logs were examined. In addition, witnesses, friends, family members, and coworkers were interviewed. The field phase of the investigation concluded on July 18, 2007.

D. DETAILS OF INVESTIGATION

History of the Flight

Interviews with company personnel and fueling receipts revealed that prior to the accident flight, the airplane was towed from its hangar, and fueled with 85.3 gallons of 100LL fuel, which filled both main and auxiliary fuel tanks. FAA data revealed that an IFR flight plan was filed for the flight from DAB to LAL, with a proposed departure time of 0830 local time. According to the flight plan, the commercial pilot was designated as the pilot in command, and he and the other pilot were the only two people listed on board.

At 08:32:50¹, shortly after reaching a cruising altitude of 6,000 feet, the flight crew declared an emergency to the Orlando International approach air traffic controller (ATC).² The crew advised that there was "smoke in the cockpit," and announced their intention to land at SFB. ATC cleared the airplane to fly directly to SFB and descend to 2,000 feet. Radar data indicated that the accident airplane turned toward SFB and commenced its descent. ATC then cleared the accident crewmembers to "to land any runway." The last radio transmission from the airplane occurred at 08:33:15. It was terminated in mid-sentence and appeared to include the phrase "shutoff all radios, elec." The last radar return from the accident airplane was at 08:34:50, about 1/2-mile east of the accident site.

According to several witnesses in the area of the crash site, their attention was drawn to the airplane because of its high speed and low altitude as well as its position and orientation in relation to SFB, as it was "going the wrong way." Many of the witnesses stated the airplane was traveling "extremely fast," was "very low," and the wings were "rocking." Just prior to impact, the airplane entered a "steep bank" and made a sharp turn to the west. Several witnesses described smoke trailing from the airplane, and one witness stated, "...smoke was trailing from the port side."

The tower manager at SFB stated that he was in the tower cab observing operations when the accident airplane declared the emergency. The tower manager located the target on the radar display, acquired the airplane visually, and estimated it was about 1,500 feet altitude in a steep descent before it descended below the tree line and out of view. The tower manager could not determine the course of the airplane, did not notice the bank angle, but noted that it was, at least partially, in profile. He did not report smoke trailing from the airplane.

At 0853, the weather reported at SFB, which was located four miles southeast of the accident site, included clear skies, 10 statute miles visibility, and winds from 200 degrees at 5 knots. The temperature was 29 degrees Celsius, and the dew point was 23 degrees Celsius. The altimeter setting was 30.14 inches of mercury.

¹ Based on ATC recorded tapes and transcripts.

² Orlando International ATCT Satellite Radar North Position

A maintenance discrepancy log sheet recovered at the accident site, annotated during the previous day's flight, described the weather radar display as going "blank" during cruise flight, accompanied by a "smell of electrical components burning. Turned off unit - pulled radar [circuit breaker] - smell went away." No corrective action was annotated next to the discrepancy write-up, and no evidence was found to indicate that corrective action was taken prior to the mishap flight.

Post accident interviews with company personnel indicated that during a phone conversation the day prior to the accident, the ATP was made aware of the weather radar discrepancy item. A company aircraft mechanic confirmed that the ATP stated that he "didn't care about the radar" during a telephone conversation on the morning of the accident.

None of the company personnel interviewed remembered seeing either member of the accident flight crew reviewing the airplane discrepancy log prior to departure, but one mechanic did recall that the ATP performed the preflight inspection of the airplane.

PERSONNEL INFORMATION

Airline Transport Pilot

The ATP, age 56, held an ATP certificate with ratings for airplane multi-engine land and instrument airplane. He also held a commercial pilot certificate with a rating for airplane single-engine land, and a flight instructor certificate with ratings for airplane single-engine land, airplane multi-engine land, and instrument airplane. According to company records, he had accrued 10,580 total hours of flight experience, with 67.1 hours in make and model. His most recent FAA first-class medical certificate was issued in June 2007. The medical certificate had a limitation that the holder must wear corrective lenses.

The ATP's initial hire date with NASCAR was on October 1, 1985. He was type-rated in CE-500, CE-550, CL-600, DA-50, DA-2000, HS-125, IA-JET, LR-60, and LR-JET, and most recently served as captain on the Falcon 50 (DA-50).

On January 25, 2007, the ATP completed Cessna 310 proficiency training at SIMCOM, Orlando, Florida. An examination of the training syllabus revealed that the 3-day course normally involved 9 hours of classroom training, 1.5 hours of briefing, 6 hours of simulator training, and 1.5 hours of debriefing. The ATP completed the training in less than the programmed syllabus time. In an interview, the ATP's instructor stated that the ATP was "highly qualified," required little or no academic instruction, and showed "exceptional" proficiency in only two simulator sessions.

According to interviews with NASCAR personnel, the ATP's training was completed for the purpose of serving as safety pilot for the commercial pilot.

The ATP occupied the right seat on the accident flight.

The ATP's flight experience was:³

³ This was determined from the pilot's company records.

Total time	10579.4
Single-engine land	3648.4
Multi-engine land	6884.7
Night (total)	1068.9
Instrument (total)	919.5

ATP's flight time in type (Cessna 310)

Total	67.1
Previous 90 days	49.7
Previous month	17.4

Commercial Pilot

The commercial pilot, age 53, held a commercial pilot certificate with ratings for airplane single engine land, airplane multi-engine land, and instrument airplane. His pilot logbooks were not recovered, but a review of company and FAA records revealed an estimated 276 total hours of flight experience; of which, 106 hours were multi-engine experience, and 26 hours were in make and model. The commercial pilot's most recent FAA third-class medical certificate was issued in December 2005, with no limitations.

On January 25, 2007, the commercial pilot completed Cessna 310 proficiency training at SIMCOM, Orlando, Florida. The commercial pilot's instructor was interviewed and he stated that at the beginning of the course, the commercial pilot told him that he was attending the course in order to fly the company Cessna 310. He also said that the company would not allow him to fly the Cessna 310 alone. The instructor stated that the commercial pilot demonstrated the proficiency level of a "low-time pilot, with very little multi-engine time."

During the training, the commercial pilot's performance was "weak," but after being counseled by the instructor, his performance improved somewhat. By the third day of training, the commercial pilot's performance had become "kinda weak" again. According to the instructor, "I kept talking to [the ATP]⁴, and I spoke to [their] Chief Pilot and I told him that I wasn't going to pass him. I spoke to [the commercial pilot] and told him 'You're not making it,' and he said, 'I'll do better.' He put his mind to it, and he did better. So I kept him a little extra time, and he really caught on. I read him the riot act, and he really improved."

The instructor added, "I'm not above flunking people, but he showed improvement, so I passed him. I've flunked people for having a bad attitude, and for poor judgment. I'm a retired Air Force officer. My opinion was that [the commercial pilot] did all right. I would have felt okay letting him fly solo."

The instructor further stated that, "The Chief Pilot called me and he wanted to know how [the commercial pilot] performed, he wasn't sure if [the commercial pilot] would pass. He's the one who told me that if [the commercial pilot] put his mind to it

⁴ Bracketed designations are in lieu of personal names mentioned in the quotation.

he would complete the task. He impressed me that it would stick with him.” The instructor said that the Chief Pilot told him that the commercial pilot would never fly solo without a safety pilot on board.⁵

The instructor concluded, “The way I teach the course, you do the academics in 2 days, I cover the engine procedures and electrical procedures, and I’m a stickler about those. We fly around the traffic pattern, and then do single engine procedures, then we fly partial panel, without an attitude indicator. We talked about smoke and fume elimination and in-flight fires, but you can’t really do them in the simulator.”

SIMCOM confirmed that the Cessna 310 training was not a part of their approved training programs, and was completed under FAR Part 61. There are no specific standards for training syllabi under Part 61 for training, and there are no minimum hours of training. Further, because it was not a part of the FAR Part 142 training, there was no required FAA oversight. The FAA North Florida Flight Standards District Office (FSDO) was familiar with SIMCOM because of the other approved programs but there was no requirement to inspect the C-310 training.

The company created a syllabus for ground school and a list of items to cover during the flight training device activity. The commercial pilot required more than the programmed syllabus time to complete the course. He required extra classroom instruction and an additional 2 hours of simulator instruction.

According to the Director of Aviation, the commercial pilot was a medical officer for NASCAR, was not employed in the flight department, and was not involved in flight department training. The director explained that the pilot was authorized to fly the accident airplane for his personal use by corporate officers, but only when accompanied by the accident ATP, who was the company's "most senior captain." He further stated that the commercial pilot would act as pilot in command, and would not receive flight instruction from the ATP.

The Director of Aviation explained that these restrictions were placed on the commercial pilot by corporate officers, one of whom was the pilot’s wife. The pilot-in-command/ safety pilot distinctions were made to separate the commercial pilot’s activities from typical NASCAR aviation activities, but these distinctions were not identified in the company’s Standard Operating Procedures (SOP).

Interviews with company personnel revealed that operational control of each flight with the commercial pilot at the flight controls, actually rested with the ATP. The ATP made dispatch, configuration, and go/no-go decisions. Further, the ATP was qualified and authorized to perform any assigned NASCAR mission in the accident airplane as single pilot, where the commercial pilot was not.

The commercial pilot occupied the left seat on the accident flight.

The commercial pilot’s flight experience was:

Total time	276.0
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⁵ According to the Chief Pilot, his conversation with the instructor occurred after the commercial pilot completed training.

Single-engine land	170.0
Multi-engine land	106.0

Commercial pilot's flight time in type (Cessna 310) ⁶

Previous 90 days	11
Previous month	6.1
Total	26

24-Hour History

Airline Transport Pilot

The day of the accident was the ATP's third duty day since July 1, 2007. The day began at 0700, and the accident flight was his first flight of the day. The ATP was not on duty during the day prior to the accident flight.

Commercial Pilot

During the day prior to the accident, the commercial pilot, a medical doctor, consulted with patients in his office from 0800 to 1300, and then returned home to prepare for a family vacation. The commercial pilot did not perform any scheduled or emergency surgeries, nor was he on call during that time. He last flew the accident airplane four days prior to the accident.

Medical and Injury Information

The ATP and commercial pilot were fatally injured. The Office of the Medical Examiner for Volusia and Seminole Counties, Florida, performed the autopsies on each pilot. Both pilots died as a result of "Multiple blunt force trauma."

The FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed the toxicological testing of each pilot.

Test results for carbon monoxide in the commercial pilot were "negative." Tests for carbon monoxide and cyanide in the ATP were "not performed" due to lack of suitable samples. Putrefaction of the specimens was noted on the toxicology reports for both pilots.

Toxicological testing performed by the Office of the Medical Examiner revealed "negative" results for alcohol in the vitreous of the commercial pilot.

It could not be determined if either or both pilots were manipulating the flight controls at the time of the accident.

Aircraft Information

⁶ Based on company records.

Examination of FAA and company records revealed the Cessna 310R (s/n 310R0866) was manufactured in 1977. The airplane was purchased and registered to Competitor Liaison Bureau, Inc., (CLBI) on March 16, 1995. The airplane was domiciled and maintained at the NASCAR Daytona Beach facility, and used for short trips, such as parts pickup and other errands.

The airplane had accrued 4,740 total aircraft hours. It was on an annual inspection program, and its most recent annual inspection was completed October 11, 2006, at 4,717 aircraft hours.

Weight and Balance

This sample weight and balance was completed by the Cessna Air Safety Group, and reflects an estimated empty weight and weight and balance data for the accident airplane and sample loading based on the published weights of the pilots, and a full fuel load at departure.

According to company personnel, the crew departed with both main and auxiliary fuel tanks full, no baggage, and no passengers. An estimated 50 pounds was placed in seat 3 to allow for personal items and publications that may have been carried by the crew.

Loaded Aircraft				
	wt.	arm	mom/100	C.G.
Empty wt.	3736	xxx	1385.0	
Fuel Main	600	xxx	210.0	100 gals
Fuel Aux.	378	xxx	178.0	63 gals
Seat #1	155	37	57.4	
Seat #2	234	37	86.6	
Seat #3	0	68	0.0	
Seat #4	0	68	0.0	
Seat #5	0	102	0.0	
Seat #6	0	102	0.0	
Aft baggage	0	126	0.0	
Nose baggage	0	-31	0.0	
Wing lock bag	0	63	0.0	
Total Wt.	5103	37.565	1916.9	

The airplane's estimated weight was 5,103 pounds at the time of the accident, which was below the manufacturer's maximum allowable gross weight of 5,500 pounds. The center of gravity was within the operating envelope.

Emergency Procedure

According to the Cessna 310R Pilot's Operating Handbook, the emergency procedure for INFLIGHT CABIN FIRE OR SMOKE was:

1. Electrical load – REDUCE to minimum required.
2. Attempt to isolate the source of fire or smoke.
3. Wemacs (overhead vents) – OPEN.

4. Cabin air controls – OPEN all vents including windshield defrost. CLOSE if intensity of smoke increases.

CAUTION: Opening the foul weather window or cabin door will create a draft in the cabin and may intensify a fire.

5. Land and evacuate airplane as soon as practical.

COMPANY INFORMATION

NASCAR Fleet

At the time of the accident, NASCAR operated a fleet of 9 airplanes, including two Hawker 800XPs, one Hawker 400XP, one Gulfstream 450, one Falcon 50, one King Air 350, one Citation 3, one Lear 31A, and the accident airplane. The airplanes were hangared at two separate locations: DAB and Concord, North Carolina (JQF). Some of the airplanes were permanently stationed at these bases, while others rotated between the bases as a function of operational needs.

During interviews, the Director of Aviation, the Director of Maintenance (DOM), and the Chief Pilot (CP) each said that standardization in any of their programs was extremely difficult when operating nine different airplanes.

The Director of Aviation stated he had pushed for fleet standardization of the fleet as a safety benefit, and that in response, NASCAR purchased two Hawker 800 and ordered two Hawker 900 airplanes.

NASCAR Daytona Maintenance Facility and Organization

NASCAR occupied two hangars at DAB. The hangars and adjoining offices functioned as the corporate offices for the aviation division of NASCAR. One hangar was used primarily for aircraft shelter, and the other was used primarily for maintenance activities. The NASCAR Aviation Division offices were located in a building attached to the maintenance hangar.

The Aviation Director headed the Aviation Division. Both the CP and the DOM reported directly to the Aviation Director. The DOM's office was physically located on the opposite side of the hangar from the offices of the Director and CP.

Company Standard Operating Procedures

According to the SOP, a captain, or pilot-in-command, must hold an ATP certificate with appropriate type ratings. Additionally, prior to serving as pilot-in-command on any type aircraft operated by the company, the pilot must complete an FAA or company-approved initial training program.

The commercial pilot completed Cessna 310 training, but did not meet the ratings requirement in the SOP; neither did the company document any exceptions in the SOP for him.

The personal use of the airplane was contrary to the SOP, which stated, “The expeditious transportation provided by Company aircraft is to be directed to those activities which have a positive impact on corporate earnings.” According to the Director of Aviation, the commercial pilot’s assistant would sometimes call to schedule the airplane, and would sometimes call the ATP directly. According to the SOP, “The use of company aircraft will be requested by completing a corporate aircraft utilization request form.” In addition, “The chief pilot will evaluate and approve all aircraft charter services used by NASCAR personnel.”

The SOP stated that the Director of Maintenance “shall plan and supervise the maintenance of NASCAR aircraft including non-scheduled inspections and maintenance.” He was to ensure that all work was done in accordance with applicable Federal Aviation Regulations (FARs), and was responsible for the airworthiness of all aircraft and their return to service. Further, he was to ensure that maintenance performed, and maintenance items deferred were documented properly.

The discrepancy sheet that described the malfunctioning radar and the burning smell, found at the accident site, was the original. The company pilot, who previously flew the airplane and wrote the entry in the discrepancy log, stated in an interview that he handed the carbon copy to the DOM. Interviews with the DOM and company mechanics revealed that no one in the maintenance department had seen the write-up, and that no one had taken any action to correct the discrepancy. The DOM stated that he never saw the original or the carbon copy, but was made aware of the discrepancy during a conversation with the company pilot and the Chief Pilot.

The mechanic, who took primary care of the accident airplane, towed the airplane outside and serviced it with fuel prior to the accident flight. He did not examine the discrepancy log, or make any effort to determine the airworthiness of the airplane prior to its departure. According to the DOM and the SOP, maintenance technicians and pilots are supposed to review the discrepancy log in the airplane as part of their preflight inspection.

The Director of Aviation was asked how a pilot would determine the airworthiness of an airplane that he or she was assigned; he stated that most often, a “preflight sheet” was taped to the airplane with highlighted items signed off by a maintenance technician. He explained that this was not a requirement, not spelled out in the SOP, and that a pilot could “get a verbal” from maintenance on the airplane’s status. The SOP simply stated, “... all crewmembers must be familiar with the maintenance status of the aircraft.” No guidance was provided to pilots-in-command for determining airworthiness of assigned aircraft.

E. LIST OF ATTACHMENTS

Attachment 1 – Witness summaries

Attachment 2 – Interview summaries

Attachment 3 – Flight Instructor Training Record

Attachment 4 – Weight and Balance Data

Attachment 5 – Discrepancy Sheet

Attachment 6 – Weather Report

Attachment 7 – Toxicological Reports

Submitted by,

Brian Rayner
Senior Air Safety Investigator
National Transportation Safety Board

Attachment 1 – Witness summaries



National Transportation Safety Board

Memorandum

Date: July 11, 2007
Name: David Kunzer
Subject: NYC07MA162 Sanford, Florida

Mr Kunzer was a railroad worker who witnessed the accident listed above, from the rail yard about ¼ mile from the crash site. Mr. Kunzer was interviewed at the crash site, and the following is a summary of the interview.

Mr. Kunzer said that he watched the airplane approach his position at low altitude, about 100 feet above ground level. He said he could not estimate the speed of the airplane.

According to Mr. Kunzer, "I heard the motors before I saw the plane. Those motors were screaming. He was heading right for us. The wings were rocking, and then he banked right. It was a hard bank, about 70 degrees, and then he disappeared behind the trees."

Brian C. Rayner
Senior Air Safety Investigator



National Transportation Safety Board

Memorandum

Date: July 11, 2007
Name: Ryan Cooper
Subject: NYC07MA162 Sanford, Florida

Mr Cooper was a firefighter who witnessed the accident listed above, from the driveway of his home. At the time of the accident, Mr. Cooper recovered some of his firefighting gear from his car, responded to the scene, and affected rescues in two burning homes. Mr. Cooper was interviewed at his home, and at the scene, and the following is a summary of the interview.

Mr. Cooper lived about 100 yards from the crash site and watched the airplane approach his position from the east. He grew up in the area around SFB, and said he was quite familiar with the approach and takeoff patterns for airplanes at the airport. He said, "The sound and the speed is what got my attention. They were too fast, too low, and headed the wrong direction. I didn't see any fire or smoke, and there was definitely no [landing] gear."

Mr. Cooper went on to say that as quickly as he noticed the airplane, it struck the tree line at the eastern side of his housing development, tumbled into two houses, and ignited them in a large fireball. He recovered his firefighting coat and coveralls from his car, ran to the scene, affected rescues in one house, and attempted rescues in the second. When he described his entrance into the two-story home that was on fire, he said, "Fuel was pouring through the ceiling from the second floor and down the stairs."

Brian C. Rayner
Senior Air Safety Investigator

Rayner Brian

From: mindy Black - - -]
Sent: Monday, July 16, 2007 9:36 PM
To: Rayner Brian
Subject: Memories

I was walking North in my neighborhood. (Venetian Bay) which is about 3 blocks away from the neighborhood where the plane crashed. So I was out walking, when I heard a plane over head, as I usually do seeing how the air port in about 3miles from here. Well, This day the plane was very low, traveling West. It was probably the height of our roof. I almost did a duck my head number. It was smoking and it was going fast, it was low. it was Teeter tottering. Then I was going to keep walking, I took about 2 more steps in front of me, I heard a crash, I looked over and there was a big ball of smoke. From where I was in the neighborhood it looked like it was right behing my house, so I took off running after realizing what had just happened. all i could see was the mass amounts of smoke that filled the air. i heard the second and maybe 3rd Boom. When i got to my house my view was blocked by the wall of their neighborhood and trees and a church. all i could see is the smoke. when I looked up into the air it looked like floating pieces of metal and debris from the plane. Probably about 7 minutes went by I when I heard all the Sirens that lasted for hours it seemed. as well as the helicopters circling the houses.

I hope some of this will help. It is insane to have to write this back to someone. Hearing it when i read it dosen't sound like anything. The sight is unforgettable. I can't even imagine the ones who saw the plane go down.

Thanks for listening,

Mindy Black

Mindy Black
Licensed Esthetician
Juice Plus+

[More photos, more messages, more storage-get 2GB with Windows Live Hotmail.](#)



National Transportation Safety Board

Memorandum

Date: January 4, 2008
Name: Witness Hotline Synopsis
Subject: NYC07MA162 Sanford, Florida

Following the accident listed above, a witness hotline was established at the NTSB communications center. The following is a brief synopsis of those phone calls.

Ryan Derryberry (-----) observed aircraft overhead, flying approx 300ft; tipping wings, smoking; says A/C was on approx 45-degree angle; witness was approximately 1 or 2 miles from crash site.

Mindy Black (-----) observed aircraft overhead, flying low (couple dozen feet) smoking, tipping wings, "out of control," "going in wrong direction for landing at airport"; aircraft left her line of sight, went over treeline, heard impact. Witness was approximately 3 blocks from crash site.

Mr. Dave Jones (-----) observed A/C approx. 4 miles from crash site making a "snapping" and "popping" sound as it flew overhead.

Dr. George Besong (-----) observed A/C traveling at a high rate of speed and downward angle toward housing complex.

Kevin Rocklein (-----) witnessed the accident from work. He is/was a general aviation mechanic. Saw the plane coming in and witnessed the A/C's wings wagging. A/C did an abrupt 90 degree turn to the west. Noticed a small amount of white smoke coming from the port side of A/C. Saw plane pass over the hill and a few seconds later heard a thump.

He had given his name and number to the Police on scene, but wanted to make sure we had it also.

Wally Bishop (-----) has over 3000 hours in a Cessna 310 and claims to have had a very similar incident while flying to Lakeland, FL in 2000. There was trouble with the instrument cluster behind the amp meter that caused a large amount of smoke to enter the cockpit.



National Transportation Safety Board

Memorandum

Mr. Welch ----- heard plane fly over his house right before crash and managed to get a picture. Mr. Welch said the engines were running smoothly and without interruption.

Mel Lyons pilot of Citation N217FS that departed Daytona immediately after N501N. Heard them tell tower they lost radio shortly after t/o but was back on. ----- .

Don Hupp ----- . Saw a/c fly directly overhead, lives about .5 mi from scene. Saw left wing down @ 45deg angle. He is a licensed pilot.

Frank Robinson -----) is the pilot of a Cessna 310 and claims to have an incident that looks identical to the one that happened in Sanford. He insisted on talking to you and is convinced that he has information vital to the investigation.

From Frank Burns, C)----- or home ----- . Lives in Deltona, believes he saw and heard the a/c just before crash.

Michael Kelch (also a pilot) was traveling on US 17-92. He saw A/C take a hard left at full throttle away from Lake Monroe with nose pointing down. A/C hit the ground within 10 seconds and he saw smoke rising within 30 seconds of impact. ----- (cell) - email: -----

Julie and David Simison ----- (work) saw the A/C as they were driving to work on US 17-92 near Lake Monroe. They called 911 at the time to report it.

Bruce and Ruth Rhey ----- overheard A/C as it flew over nearby church before crash, Bruce is also a pilot.

Christopher Hamlet; ----- (cell), he is an ex-pilot who saw the plane descend from about 3000 ft before going behind trees and crashing, says he can describe what happened.

Anita Wilson -----) observed the A/C from highway and noticed smoke coming from the tail before impact.

Jay Adcock; ----- (cell), Works as a roofer, was on roof 2.5 blocks from crash when it occurred.

Sharon Thompson;----- (home), ----- (cell). Says she saw last 20 seconds of flight prior to crash.



National Transportation Safety Board

Memorandum

Brian C. Rayner
Air Safety Investigator

Attachment 2 - Interview Summaries

NYC07MA162

Operations Department Chief Pilot

Personal Information	
Name:	Van Brendle
Date of Hire:	October 2002
What certificates do you hold?	ATP LR-60, LR-JET, DA-200EX ASTRA, CA ASEL CFI-A and I 10,300 hours.
What is your title?	Chief Pilot since August 2004.
Who do you work for:	Jim Pomroy

July 9, 2007

Recount of Radar Write Up

- Van Brendle talked to Mike Klemm about 501N on the evening of 7/9.
- Van Brendle told Mike Klemm that maintenance needed to look at the radar in the airplane.
 - It was not painting obvious weather.
 - The pilot thought he detected an odor.
 - Thought it was a burning and he turned it off and found the CB and the smell went away.
- Van Brendle confirmed that Andrew Tumicki had told maintenance about the write up.
- Brian Weselmann showed up and Andrew Tumicki briefed him, but Van Brendle didn't hear the conversation since something else came up.
- Brian Weselmann said, "It will be OK, just tell Mike Klemm not to turn it on".
- Van Brendle told Mike Klemm about the smell and that it occurred about one hour after take off. It was OK for the next one and a half hours.

- Van Brendle called Mike Klemm because Mike Klemm was a friend and all activities connected with the 310 and Dr. Kennedy involved Mike Klemm. He did not call Dr. Kennedy.

- Van Brendle likes Jim Pomroy and thinks he is not a micromanager, but if he makes a mistake, he is accountable. Jim Pomroy gets things done.

Discrepancy/Squawk reporting process

- Van Brendle finds out about a flight a number of ways.
 - They post the schedule on the internet, international flights are also available, and the pilots can call after 1600 for the next days schedule.
- Crews must show up 2 hours prior to departure for international flights and one hour for domestic flights.
- The logbooks are kept in maintenance.

NYC07MA162

- The pilots get the flight manifest that has all the information for each day.
 - On the jet, one crewmember does the preflight, the other gets ice and coffee.
 - They decide who will fly first a variety of ways and then get on the aircraft.
- If a crew has a discrepancy they will write it up. If they are going to a maintenance base they will often call it in prior to landing.
- A copy of the squawk sheet goes to maintenance a couple of ways.
 - It can be put in the box on Brian Weselmann's door.
 - Placed in his mailbox in the front office.
 - Personally handed to Brian Weselmann.
- Pilots do not talk to the dispatcher.
- Maintenance makes the call about the airworthiness because it can be complicated.
 - If the aircraft is going to be grounded maintenance tells scheduling.
- The company does not have a status board where the pilot can see it.
- Brian Weselmann holds the maintenance records pretty close; pilots are expected to accept Brian's word that the aircraft is ok.
- If the aircraft is hard down after hours the pilot will call Brian/Jim/Van to let them know.
- If company personnel that are high up in the company and want to schedule a trip they usually contact Sharon Epps to check availability.
- If the aircraft is available they will then submit a written request.
- Brian gets the schedule each day and keeps track of maintenance.

July 10, 2007

- This day was a light day for flying.
- If there were two launches or less that would be a light day and three launches or more would be a heavy day.
- Van Brendle arrived at 8:25am after the aircraft had already left.

Follow on Discussion regarding the Discrepancy

- When he was shown the white sheet discrepancy, he stated that he would not fly with the discrepancy as shown.

Van Brendle stated that standardization of training was extremely difficult when operating 9 different airplanes.

NYC07MA162

Brian C. Rayner
Senior Air Safety Investigator

NYC07MA162

Aviation Department Aircraft Technician

Name:	Juan Solis
Date of Hire:	October 1995
What certificates do you hold?	Airframe & Powerplant and Inspection Authority
What is your title?	Aircraft Technician
Who is your employer?	NASCAR Aviation
Who do you report to?	Brian Weselmann

Maintenance Facilities

- Two bases, one in Concord, NC
- Whenever there is heavy maintenance we farm it out to a service center.

Fleet Comments

- The Cessna 310, N501N was based here in Daytona Beach (DAB), Florida entirely.
- The intent is to have every other annual completed by contract maintenance.
- I have been fixing Mike Klemm's airplane since 1984.
- Basically, I am the crew chief of the airplane.

Organizational comments

- The workday is usually from 7 am to 4 pm.
- I have weekend duty every 5th weekend.
- I am here two hours prior to any aircraft launch.
- All mechanics are A&P's
 - Mechanics show 2-3 hrs early prior to an aircraft launch.
 - Approximately 6-7 mechanics are at DAB and we alternate "early weeks."
- But if I have an early week, I'll be here at 4 am for an early week to make sure the airplane is ready to go.
- Brian Weselmann is well paid for his position.

Policy & Guidance

- Our paperwork has never been as well kept as it has since Brian Weselmann got here. The paperwork is immaculate.

NYC07MA162

Recount of the Discrepancy/Squawk reporting process

- The discrepancy/squawk sheet consists of a white (original) copy and the yellow (carbon) copy.
- The pilot calls in with a squawk before they land.
- Every morning we (the mechanics) meet with the boss, get a briefing. The briefing comes off the yellow sheets.
- Asked about the process for significant maintenance squawks. I ask the boss, “Do I have to go to the scheduler and ground the aircraft?”
- The pilot doesn’t have a lot to say about the airplane or the write up. The decision to ground the airplane comes from Brian Weselmann. Then, Brian Weselmann and Jim Pomroy, Director of Aviation make the final decision.
 - When Brian and/or Jim are not here I will call them on the phone.
- I would take the airplane outside, top it off, do the windows, etc.
- I make sure that the airplane is fixed or repaired. I would sign it off in the discrepancy book.
- Once the airplane is repaired, I advise my boss.
- Pilot squawks the airplane and the yellow one goes to my boss. Then, the discrepancy is signed off on the white copy with the airplane. I don’t sign off the yellow copy.

Pre- & Post Flight Inspection Sheets

- The preflight sheet was not prepared that morning. Sometimes we’ll pull the airplane outside and I’ll peel the discrepancy/squawk sheet off and throw it away.
- I verbally briefed Mike Klemm on the condition of the airplane that I topped off the airplane, cleaned the windows and checked the tires.
- Mike Klemm pre-flighted the airplane. He was very picky about that stuff.

Maintenance Records (Logbooks)

- The discrepancy/squawk sheet consists of a white (original) copy that stays with the airplane and the yellow (carbon) copy goes to Brian Weselmann.
- I am not sure where or how he keeps the yellow copies.

Maintenance Write-up/Maintenance Clearing Action Forms

- The completed white (original) write-ups must remain with the aircraft “for awhile”.
- I do not need to make an entry in the logbooks unless the discrepancy is severe.

Radar Write up/ Symptoms

- Regarding the radar write up, Andrew Tumicki did not communicate anything about odor, smoke or anything.

NYC07MA162

Events of July 9, 2007 (Mon)

- I met the airplane around 4pm.
- I asked Andrew if there were any problems with the aircraft. Andrew stated yes, the radar has a problem, it isn't working and he had pulled the CB.
- I put the airplane back in the hanger along with John (mechanic), Tim (mechanic), Kurt (mechanic) and Brian Weselmann.
- I was aware that it would fly. When I put it away, they told me there was a flight at 8 o'clock the next morning.
- I'll service the airplane the following morning."

Events of July 10, 2009 (Tues)

- I got to work at 600am for an 800am take off.
- I was not alone; I had another mechanic with me.
- I got a phone call from Mike Klemm about 6:45, saying, "You have to top off the airplane." He said, "We have a discrepancy with the airplane." He responded, "I know about the radar, I don't give a shit about that, I'm taking the airplane."
- Mr. Klemm did the preflight on N501N.
- I believed this was a pleasure flight.
- I didn't see the write up or see the discrepancy book.
 - I did not collar the radar Circuit Breaker.
- The last six weeks they had been using the airplane with Dr. Kennedy.
- I told Mike Klemm that I would top it off, do the windows, and check the log book if I had time.
- I took care of the two launches that morning.

Follow on Discussion regarding the Discrepancy

- I never went inside the airplane.
- Brian Weselmann told me that the radar went out and that he personally didn't know about any odor or smoke.
- I did not collar the radar circuit breaker.
- I would not have released the airplane had I read this write up. I would not have released the airplane. I would have told him no.
- Do you think Mike Klemm knew about the severity of that write up? "No!"
- I just think that if I had taken my time that I could have taken care of that discrepancy.
- There's no MEL for the 310, but that's a very good idea.
- I think that Dr. Kennedy was trying to build some time.

Brian C. Rayner
Senior Air Safety Investigator

NYC07MA162

Aviation Department Director of Aviation

Personal Information	
Name:	Jim Pomroy
DOH:	1987 22years total, but 20 years continuous
What certificates do you hold?	ATP, ASEL, AMEL, FLT Instructor -10 type ratings.
What is your title?	Director of Aviation
Who do you work for:	Mike Helton, President of NASCAR

Maintenance Facilities

- Daytona Beach, Florida (DAB) and Concord, North Carolina (JQF).

Fleet Comments

- I manage Bill France's G-450 and a Hawker in Charlotte. They operate under our Standard Operating Procedures (SOP).
- I am pushing for fleet standardization as a safety benefit. NASCAR responded by purchasing 2 Hawker 800 and ordering 2 Hawker 900 aircraft.
- The 310 sat in the hangar a lot and the jets were the priority.
- When asked if other family members flew NASCAR aircraft, he said "Not at all. We never had family members flying company airplanes. Bill France Jr. would sometimes fly but that was 20 years ago."
- Very few personal flights in NASCAR aircraft, the Cessna 310 was used primarily for business.

Jim Pomroy - General Comments

- Dave Holcomb (NASCAR risk manager) dictated that an experienced pilot must fly with Dr Kennedy.
- I made it clear to Mr. Klemm that Mr. Klemm was not pilot in command, was not to give flight instruction, and that he was not a safety pilot.
- Dr. Kennedy was not allowed to take the C310 alone.
- I told the Chief Pilot and the scheduler that Dr Kennedy could not fly the C310 alone; that he must fly with Mr. Klemm.
- Dr. Kennedy's assistant would sometimes call to schedule the airplane and would sometimes call Mr. Klemm directly.
- I did not "keep tabs on" Dr Kennedy. In hindsight, "maybe I should have."

Staff/ Organizational Chart

- On the Organizational Chart "Mtce 1 & Mtce 2" next to mechanics denote experience levels, with 2 having more experience

NYC07MA162

Standard Operating Procedures (SOP)

- The SOP's were outsourced to a vendor. The vendor provided the template, Jim Pomroy and Mr. Klemm edited to develop NASCAR version.
- Mr. Pomroy did not have an SOP readily available.
- SOP distribution "had been a while." Maybe a year to a year and a half.
- We've revised our SOP and the changes will be out soon.
- Do you have an SOP on how OPS should be run? Both Van Brendle and Brian Weselmann have SOPs. Preflight sheets in the maintenance SOP? "Probably not."
- The SOP is used as a training tool.
- The SOP does not include discrepancy log procedures.
- Does not think Aircrew SOP has any info regarding the discrepancy forms.

Discrepancy reporting process

- The discrepancy/squawk sheet consists of a white (original) copy and the yellow (carbon) copy.
- "There's a squawk sheet. You write it up, don't rely on word of mouth."
- One copy of the discrepancy/squawk sheet consists of a white (original) copy that stays with airplane and the yellow (carbon) copy goes to the Brian Weselmann.
 - "I wish I could say that we kept the white ones, but we don't."
- I don't know what Brian Weselmann does with the copies. I believe that the yellow copy goes to Brian Weselmann. There's no suspense on the squawk sheets.
- Brian is to call me at home if something is wrong.
 - Brian Weselmann gets pretty bogged down with a lot of things.
- The pilot taking the airplane is responsible for reviewing the books, and deciding if he should take the airplane. Once cleared, there should be a notation. In the heat of battle, sometimes we don't do that.
- The pilots are to call me after every flight.
- Problems with the aircraft do not relieve the pilot from ultimate responsibility.
- When the pilot has a problem with the aircraft that is considered a write-up, everyone knows about it, and Brian will usually let them know what the status of the aircraft is.

Maintenance Release/ No Fly

- There's a preflight sheet taped to the airplane, and the technician looks at certain items and they are signed off. Is that preflight sheet a must-have item? Maybe it should be, but no, you could go to maintenance and get a verbal.
- I have gotten involved before, but when the pilot in command gets on board, he makes the call. But we are all involved in the decision.

NYC07MA162

N501N Problem

- “I had heard that Dr. Kennedy was going to take a trip down south. Sharon Epps keeps me in the loop. I was at the chiropractor. No I didn’t know about any problems with the airplane.”

Comments on Radar Write up/Discrepancy

- Was shown the white discrepancy sheet from the accident airplane with the write-up regarding the radar. He questioned how “tall” the word “burning” would appear to a pilot pre-flighting the airplane if did not know about the accident.
- When asked, he responded that he “might not take the aircraft” if he saw the write up. He would ask maintenance. “I would question the write up. Local flight though, maybe VFR. Had I known about that I would have backed up three steps.”

Brian C. Rayner
Senior Air Safety Investigator



National Transportation Safety Board

Memorandum

Date: December 17, 2007

Name: Charlie Bukoski

Subject: NYC07MA162 Sanford, Florida

Mr. Bukoski was the SIMCOM instructor who provided proficiency training to Captain Mike Klemm and Dr. Bruce Kennedy in January 2007. He was interviewed by telephone, and the following is a summary of the interview.

According to Mr. Bukoski, "Dr. Kennedy was a real nice fellow. He started out with a minimum amount of time and his wife didn't want to fly with him, not with the kids, and not alone."

When asked about Dr. Kennedy's proficiency, he replied, "Started out average, got kinda weak, and I said 'you're not coming across.' About the 3rd day, he got kind of weak again. I told him, 'you're not making it,' and he said, 'I'll do better.' He put his mind to it, and he did better."

Mr. Bukoski explained that he kept Captain Klemm and NASCAR abreast of Dr. Kennedy's progress. He said, "I kept talking to Klemm, and I spoke to the Chief pilot and I told him that I wasn't going to pass him. Their Chief Pilot called me and he wanted to know how Kennedy performed, he wasn't sure if Kennedy would pass. He's the one who told me that if Kennedy put his mind to it, he would complete the task. So I kept him a little extra time, and he really caught on. I read him the riot act, and he really improved."

When asked if he passed Dr. Kennedy based on the knowledge that he would never fly alone, he replied that it influenced his decision, but that ultimately Dr. Kennedy passed based on his merits.

"He impressed me that [the training] would stick with him. I knew I was going to fly with him, and the Chief Pilot said that Dr. Kennedy was never going to fly alone. I'm not above flunking people, but he showed improvement, so I passed him. I've flunked people for having a bad attitude, and for poor judgment. I'm a retired Air Force officer. My opinion was that Bruce did all right. I would have felt okay letting him fly solo."

"Again, I say he was okay to solo, but my decision to pass him was based on the fact that he was going to fly with Mike Klemm, the fact that he was not allowed to fly alone,



National Transportation Safety Board

Memorandum

and because he was going to fly with me again in the future. Looking back, I'd still sign him off."

When asked about the course syllabus, the instructor said, "The way I teach the course, you do the academics in 2 days, I cover the engine procedures and electrical procedures, I'm a stickler about those. We fly around the patch, then do single engine procedures, then we fly partial panel, without an attitude indicator."

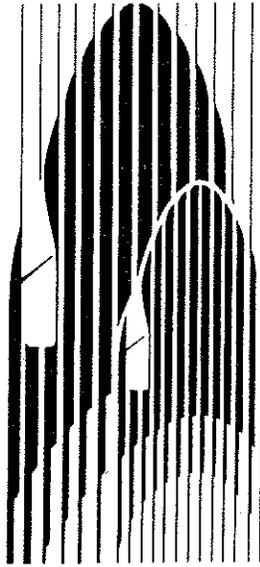
We talked about smoke and fume elimination and inflight fires, but you can't really do them in the simulator.

When asked who he felt would be pilot in command, Dr. Kennedy or Captain Klemm, he said, "I would think Klemm would be in charge, that he would be pilot in command."

Brian C. Rayner
Senior Air Safety Investigator

Attachment 3 – Flight Instructor Training Record

PILOT PROFICIENCY

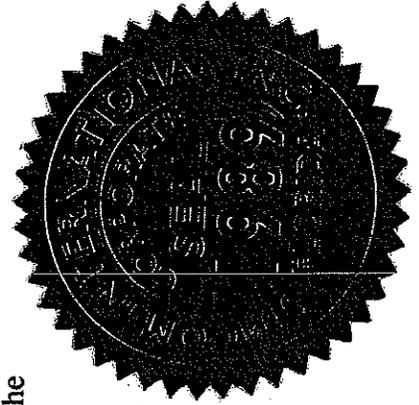


SIMCOM
TRAINING CENTERS

CERTIFICATE

Michael Alan Klemm

has satisfactorily completed a Cessna 310R Initial course in accordance with the standards of SimCom Training Centers



Thomas J. Evans
Training Center Manager

January 25, 2007
Completion Date

Simulator Proficiency Training Record

Student Name (last, first, middle initial):

KLEMM, MICHAEL A

Type of Aircraft and Serial Number

C310R0866

Airman Certificate (category w/class and type ratings):

ATP AMEL C-441/650, DA 50, DA 2000 45125
IA-JET, LRCO

Initial

Recurrent

Other

General

Cessna
(Circle One)

421B

340A

414

310Q/R

402B

Lesson Data

Grading Key: S=Satisfactory N/P=Normal Progress U=Unsatisfactory D=Demo

Date (mm/dd)	Year	07	1/23	1/24															
Duration (Pre & Post Instruction)			10	10															
Duration (Simulator Instruction)			20	20															
IP (initials)			CFB	CFB															
Lesson #			1	2															

Use of Checklists

S

S

Judgement

S

S

Crew Coordination

S

Visual/Normal Procedures

Takeoff	S	S																	
Climb (normal and cruise climb procedures)	S	S																	
Configuration Changes (slow flight)	S	S																	
Steep Turns	S																		
Stall Series	S																		
Descent	S	S																	
Landing	S	S																	
Balked Landing		S																	

Instrument Procedures

IFR Clearances/NAV/COM	S																		
Arrival, Enroute and Departure Procedures	S																		
*ILS Approach	S																		
*VOR Approach		S																	
*NDB Approach		S																	
Missed Approach Procedures		S																	
Holding		S																	
Circling		S																	
Use of Autopilot		S																	
Unusual Attitudes	S																		
Partial Panel	S																		
IP Option																			

*a minimum of two instrument approaches with an engine inoperative will be required (at least one precision and one non-precision)

Powerplant

Engine Start Procedures: Normal and Hot	S	S																	
Engine Failure During Flight	S	S																	
Airstart	D																		
Sudden Engine Roughness (421B only)	-	-																	
Engine Securing Procedures	S	S																	
Engine Failure During T.O. (speed < 100 KIAS or gear down)	<																		
Engine Failure After T.O. (speed > 100 KIAS with gear up or in transit)	S	S																	
Engine Inoperative Landing	S	S																	
Engine Inoperative Go-Around (speed > 111 KIAS)		S																	
Fire (ground and inflight)		S																	
Engine Overspeed		S																	
Obstruction or Icing of Air Inlet		S																	
Overboost/Underboost		S																	
Low Oil Pressure		S																	
IP Option																			

Mike Klemm

Lesson Data		Grading Key: S=Satisfactory N/P=Normal Progress U=Unsatisfactory U=Demo																		
Date (mm/dd)	Year	07	1/23	1/24																
Duration (Pre & Post Instruction)		1.0	1.0																	
Duration (Simulator Instruction)		2.0	2.0																	
IP (initials)		CFB	CFB																	
Lesson #		1	2																	

Fuel System

Engine-Driven Fuel Pump Failure		S																		
Cross-Feeding Fuel		S																		
Fuel Management			S																	
IP Option																				

Flight Controls/Wing Flaps

Landing Without Flaps (0° extension)		S																		
Electric Elevator Trim Malfunction (optional)		-	-																	
Yaw Damper (optional)		-	-																	
IP Option																				

Electrical System

Alternator Failure (single)		S																		
Alternator Failure (dual)		S																		
Avionics Bus Failure		S																		
IP Option																				

Flight Instruments/Autopilot

Vacuum Pump Failure		S																		
Obstruction or Icing of Static Source		S																		
Autopilot Malfunction		S																		
IP Option																				

Landing Gear

Landing Gear Will Not Extend Electrically		S																		
Landing Gear Will Not Retract Electrically		S																		
IP Option																				

Environmental System

Inflight Cabin Electrical Fire or Smoke		S																		
Smoke Removal		S																		
Emergency Descent Procedures		S																		
Impending Skin or Panel Failure (421B, 414 & 340A)		-																		
Cabin Overpressure (421B, 414 & 340A)		-																		
Loss of Pressurization Above 10,000 Feet (421B, 414 & 340A)		-																		
Pressurization Air Contamination (421B, 414 & 340A)		-																		
IP Option																				

Anti-Ice/Deice Systems

Surface Deice Failure		S																		
Propeller Deice Failure		S																		
IP Option																				

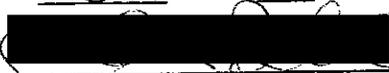
Note: (optional) annotates that the customer aircraft may be equipped with this accessory, in which case the procedure is mandatory.

Endorsement:

ICC CFB
 WINGS CFB Phase 1

Completion Status: (IP initials in block) IP - ENDORSE WHERE APPLICABLE

UNSAT
 INC
 VFR
 IFR
 PRO
 PH
 CLSRM
 OTHER



 Instructor's Signature

 10/07

 CFI Number and Exp. Date

Simulator Proficiency Training Record

Student Name (last, first, middle initial):

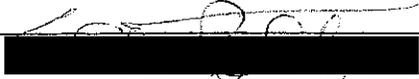
KLEMM, MICHAEL A

Additional Comments

(Date, Lesson # & IP Signature)

1/25/07

MIKE IS A HIGHLY QUALIFIED PILOT WHO FLIES A VARIETY OF AIRCRAFT. HE HAS HIGH SKILLS & FEELS EXCEPTIONALLY IN SHAP. TWO SIM SESSIONS WERE ADEQUATE.



 10/07

PILOT PROFICIENCY

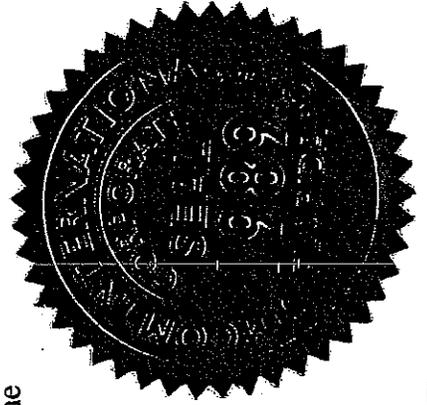


SIMCOM
TRAINING CENTERS

CERTIFICATE

Bruce Shawn Kennedy

has satisfactorily completed a Cessna 310R Initial course in accordance with the standards of SimCom Training Centers



January 25, 2007
Completion Date



Thomas J. Evans
Training Center Manager

Simulator Proficiency Training Record

Student Name (last, first, middle initial): **KENNEDY, BRUCE S.**
 Airman Certificate (category w/class and type ratings): **PVT ASME-1251**

Type of Aircraft and Serial Number: **C310R 0866**

Cessna
 (Circle One)
 421B
 340A
 414
 310Q/R
 402B

Lesson Data **Grading Key:** S=Satisfactory N/P=Normal Progress U=Unsatisfactory D=Demo

Date (mm/dd)	Year	1	2	3	4										
	07	1/23	1/24	1/25	1/25										
Duration (Pre & Post Instruction)		1.0	1.0	1.0	2.0										
Duration (Simulator Instruction)		2.0	2.0	2.0	4.0										
IP (Initials)		CFB	CFB	CFB	CFB										
Lesson #		1	2	3	4										
Use of Checklists		S	S	S	S										
Judgement		S	S	S	S										
Crew Coordination			S	S	S										

Visual/Normal Procedures

Takeoff		S	S	S	S										
Climb (normal and cruise climb procedures)		S	S	S	S										
Configuration Changes (slow flight)		S	S	S	S										
Steep Turns		S													
Stall Series		S													
Descent		S	S	S	S										
Landing		S	S	S	S										
Balked Landing			S	S	S										

Instrument Procedures

IFR Clearances/NAV/COM		S	S	S	S										
Arrival, Enroute and Departure Procedures		S	S	S	S										
*ILS Approach		S	S	S	S										
*VOR Approach			S												
*NDB Approach					S										
Missed Approach Procedures			S												
Holding					S										
Circling					S										
Use of Autopilot					S										
Unusual Attitudes			S												
Partial Panel		S		S											
IP Option		S													

*a minimum of two instrument approaches with an engine inoperative will be required (at least one precision and one non-precision)

Powerplant

Engine Start Procedures: Normal and Hot		S	S	S	S										
Engine Failure During Flight		S	S	S	S										
Airstart		S													
Sudden Engine Roughness (421B only)		-	-	-	-										
Engine Securing Procedures		S	S	S	S										
Engine Failure During T.O. (speed < 100 KIAS or gear down)		S	S	S											
Engine Failure After T.O. (speed > 100 KIAS with gear up or in transit)		S	S	S	S										
Engine Inoperative Landing		S	S	S	S										
Engine Inoperative Go-Around (speed > 111 KIAS)					S										
Fire (ground and inflight)				S											
Engine Overspeed				S											
Obstruction or Icing of Air Inlet					S										
Overboost/Underboost					S										
Low Oil Pressure					S										
IP Option		S													

Simulator Proficiency Training Record

Student Name (last, first, middle initial):

KENNEY, BRUCE S

Additional Comments
(Date, Lesson # & IP Signature)

1/25/07

AS A LOW TIME, LOW MULTI ENGINE TIME PILOT, BRUCE
RECEIVED ADDITIONAL SIM TIME TO MEET STANDARDS. I EXPECT HIM
TO DOWNSELL IN THE FUTURE

[REDACTED]

[REDACTED]

10/07



Initial Course Syllabus

Day	Classroom	Simulator (Brief and De-brief)
1	Welcome / Introduction Aircraft General Engines / Propellers Aircraft Fuel System Performance / Flight Planning	Normal Procedures Checklist Powerplant Management VMC and IMC Simulator Introduction Fuel Management Flight Profiles Emergency Procedures Checklist
2	Flight Controls / Wing Flaps Electrical Systems Flight Instruments Landing Gear	Systems Failure Analysis Avionics and Auto-pilot Emergency Procedures Checklist
3	Environmental Systems Anti-ice / Deice Weight and Balance Procedures Course Review Final Examination and Critique Thank you / Closing	Flight in Icing Conditions Emergency Procedures Checklist Aircraft Loading Procedures Systems Review / FAR's Optional Equipment and Modifications

Training Time Allocation

	Per Day	Total
Classroom	3.0	9.0
Briefing	.5	1.5
Simulator	2.0	6.0 *
De-briefing	.5	1.5
Total	6.0	18.0 *

* If paired with another student, an additional 6.0 hours of right seat simulator observation time may be available.

Individual Course Schedules May Vary

Attachment 4 – Weight and Balance Data

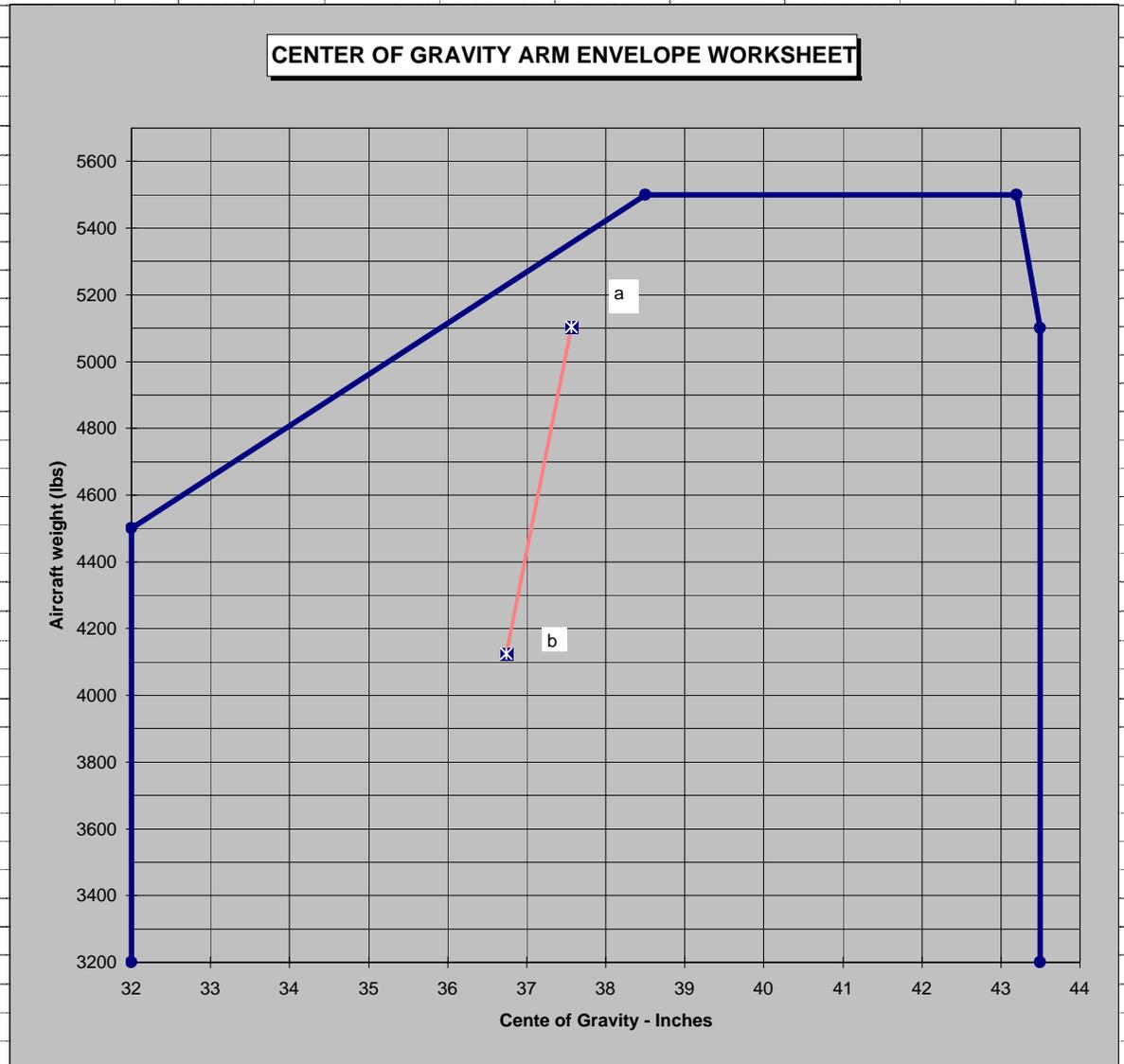
1977 Cessna 310R
 S/N 310R0866; N501N
 D/A: 07-10-07: Sanford, FL

max gross wt. 5500
 useful load = 1764

Loaded Aircraft				
	wt.	arm	mom/100	C.G.
Empty wt.	3736	xxx	1385.0	
Fuel Main	600	xxx	210.0	100 gals
Fuel Aux.	378	xxx	178.0	63 gals
Wing lock Fuel	0	xxx		0 gals
Seat #1	155	37	57.4	
Seat #2	234	37	86.6	
Seat #3	0	68	0.0	
Seat #4	0	68	0.0	
Seat #5	0	102	0.0	
Seat #6	0	102	0.0	
Aft baggage	0	126	0.0	
Nose baggage	0	-31	0.0	
Wing lock bag	0	63	0.0	
Total Wt.	5103	37.565	1916.9	

PLOT DATA				
Envelope		Actual Data		
mom/100	wt.	arm	mom.	
32	3200	37.6	5103	a Loaded a/c
32	4500	36.7	4125.0	b Empty fuel
38.5	5500			
43.2	5500			
43.5	5100			
43.5	3200			

Note 1: Shaded areas require manual input
 Note 2: a & b tags must be positioned manually
 Note 3: Table does not exactly match table in POH



Attachment 5 – Discrepancy Sheet

AIRCRAFT:

N561N

DATE:

07-09-07

-ACTT

-ACTL

MAINTENANCE WRITE-UP

MAINTENANCE CLEARING ACTION

Entered By:

ACT

Location:

DAB

Repaired

Replaced

Released- Could Not Duplicate

Loaner Installed

Corrective Action:

RADAR WENT BLANK DURING
 CRUISE FLIGHT. RECYCLED -
 NO RESPONSE... SMELL OF
 ELECTRICAL COMPONENTS BURNING
 TURNED OFF UNIT - PULLED
 RADAR C.B. - SMELL WENT
 AWAY. -
 RADAR INOP

Attachment 6 – Weather Report

Orlando Sanford International Airport
Orlando, Florida, USA

METAR KSF8 100753Z AUTO 17005KT 10SM CLR 27/23 A3006 RMK AO2 SLP179
T02720228
METAR KSF8 100853Z AUTO 18004KT 10SM CLR 27/23 A3007 RMK AO2 SLP181
T02670228 55005
METAR KSF8 100953Z AUTO 17004KT 10SM CLR 27/23 A3008 RMK AO2 SLP186
T02670228
METAR KSF8 101053Z 17004KT 10SM CLR 26/23 A3010 RMK AO2 SLP192
T02610228
METAR KSF8 101153Z 20003KT 10SM CLR 27/23 A3013 RMK AO2 SLP201
T02720228 10278 20261 53020
METAR KSF8 101253Z 20005KT 10SM CLR 29/23 A3014 RMK AO2 SLP204
T02890228
METAR KSF8 101353Z 20008KT 10SM CLR 31/22 A3014 RMK AO2 SLP205
T03110217

Attachment 7 – Toxicological Reports



U.S. Department
of Transportation
**Federal Aviation
Administration**

Mike Monroney
Aeronautical Center

P.O. Box 25082
Oklahoma City, Oklahoma 73125

Thursday, August 23, 2007

National Transportation Safety Board
8405 N.W. 53rd St., Suite B103
Miami, FL 33166

ACCIDENT #	0153	INDIVIDUAL#:	002	NAME:	KLEMM, MICHAEL A.	MODE:	AVIATION
DATE OF ACCIDENT	07/10/2007			DATE RECEIVED	07/13/2007	PUTREFACTION:	Yes
	N # 501N			NTSB #	NYC07MA162	CAMI REF #	200700153002
LOCATION OF ACCIDENT	SANFORD, FL						
SPECIMENS	Heart, Kidney, Liver, Lung, Muscle						

FINAL FORENSIC TOXICOLOGY FATAL ACCIDENT REPORT

CARBON MONOXIDE: The carboxyhemoglobin (COHb) saturation is determined by spectrophotometry with a 10% cut off and confirmed by chromatography.

>> NOT PERFORMED

CYANIDE: The presence of cyanide is screened by Conway Diffusion. Positive cyanides are quantitated by spectrophotometry and confirmed by chromatography. The limit of quantitation of cyanide is 0.25 ug/mL. Normal blood cyanide concentrations are less than 0.15 ug/mL, while lethal concentrations are greater than 3 ug/mL.

>> NOT PERFORMED

VOLATILES: The volatile concentrations are determined by headspace gas chromatography at a cut off of 10 mg/dL. Where possible, positive ethanol values are confirmed by Radiative Energy Attenuation.

>> 8 (mg/dL, mg/hg) ETHANOL detected in Liver
>> 14 (mg/dL, mg/hg) ETHANOL detected in Muscle
>> 4 (mg/dL, mg/hg) ISOPROPANOL detected in Liver

DRUGS: Immunoassay and chromatography are used to screen for legal and illegal drugs which include: amphetamine (0.010), opiates (0.010), marijuana (0.001), cocaine (0.020), phencyclidine (0.002), benzodiazepines (0.030), barbiturates (0.060), antidepressants (0.100), antihistamines (0.020), meprobamate (0.100), methaqualone (0.100), and nicotine (0.050). The values in () are the threshold values in ug/mL used to report positive results. Values below this concentration are normally reported as not detected. GC/Mass Spec, HPLC/Mass Spec, or GC/FTIR, is used to confirm most positive results.

>> NO DRUGS LISTED ABOVE DETECTED in Liver

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